

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method of preparing a polynucleotide having a target sequence from a plurality of oligonucleotides, said method comprising:

(a) coupling said oligonucleotides to form a plurality of coupled oligonucleotides, wherein each of said coupled oligonucleotides represents a region of sequence of said polynucleotide and shares at least one terminal region of sequence with at least one other coupled oligonucleotide; and

(b) assembling said polynucleotide by extension of said coupled oligonucleotides.

2. (original) The method of claim 1 wherein said coupling comprises ligating said oligonucleotides with ligase.

3. (original) The method of claim 2 wherein said ligase is T4 RNA ligase.

4. (original) The method of claim 1 wherein at least one of said oligonucleotides of said coupled oligonucleotides is attached to solid support prior to coupling.

5. (original) The method of claim 1 wherein said coupled oligonucleotides are attached to solid support.

6. (original) The method of claim 1 wherein each of said coupled oligonucleotides is amplified prior to assembling said polynucleotide.

7. (original) The method of claim 1 wherein at least one of said oligonucleotides of said coupled oligonucleotides is blocked at one end prior to coupling.

8. (original) The method of claim 1 wherein said coupled oligonucleotides comprises pairs of oligonucleotides.

9. (original) The method of claim 1 wherein said extension is carried out using overlap PCR.

10. (canceled) ✓

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cont

11. (currently amended) ~~A~~ The method of preparing a polynucleotide having a target sequence from a plurality of oligonucleotides, said method comprising according to claim 1, wherein:

(a) ~~blocking~~ the 3' end of each of said oligonucleotides is blocked, except for the oligonucleotide comprising the 5' terminus of said polynucleotide, with a blocking group to form a plurality of blocked oligonucleotides;

(b) ~~coupling~~ the 5' end of each of said blocked oligonucleotides is coupled with the 3' end of a further oligonucleotide of said plurality of oligonucleotides to form a plurality of coupled oligonucleotides; and wherein said further oligonucleotide comprises a portion of said polynucleotide immediately 5' to the sequence of said blocked oligonucleotide, ~~wherein~~

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each of said coupled oligonucleotides shares at least one oligonucleotide with another coupled oligonucleotide; and

~~(c) assembling said polynucleotide by extension of said coupled oligonucleotides.~~

12-22. (withdrawn)

23-56. (canceled)